removing a collectable quantity ~~at least some~~ of said platelets and a collectable quantity ~~at least some~~ of said red blood cells from said blood processing vessel separately and contemporaneously; ~~and~~

collecting ~~at least a portion of~~ said ~~separated~~ collectable quantity of red blood cells in a red blood cell collection reservoir separate from said blood processing vessel, and

collecting said collectable quantity of said platelets in a platelet collection reservoir separate from said blood processing vessel,

wherein said platelet separation step is completed continuously with said red blood cell separation and collection steps.

Claim 2. (Previously entered) A method as recited in Claim 1, wherein said method further comprises establishing an AC ratio of between about 6 and 16.

Claim 3. (Allowed ) A method for extracorporeal collection of blood components from a donor/patient, comprising:

flowing blood into a blood processing vessel for continuous blood processing;

separating platelets from said blood within said blood processing vessel;

separating red blood cells from said blood within said blood processing vessel continuously with said step of separating platelets;

performing a red blood cell collection set-up phase including:

establishing a packing factor of at least about 11 within separated red blood cells within said blood processing vessel; and

collecting at least a portion of said separated red blood cells in a red blood cell collection reservoir separate from said blood processing vessel, wherein said platelet separation step is completed continuously with said red blood cell separation and collection steps.

Claim 4. (Allowed) A method as recited in Claim 3, wherein said packing factor is established to be about 13.

Claim 5. (Allowed) A method as recited in Claim 3, wherein an AC ratio is established to be between about 6 and 16.

Claim 6. (Allowed) A method as recited in Claim 3, wherein an AC ratio is established to be about 8.

Claim 7. (Allowed) A method as recited in Claim 3, said set-up phase further including:

flowing separated blood components out of said blood processing vessel, wherein substantially all of said separated blood components flowing out of the blood processing vessel are accumulated for infusion to a donor/patient for at least a first volume of said blood processing vessel.

Claim 8. (Allowed) A method as recited in Claim 7, wherein, said set-up phase of said method further comprises:

returning substantially all of said separated blood components to said donor/patient for at least two volumes of said blood processing vessel.

Claim 9. (Allowed) A method as recited in Claim 3, wherein said blood is flowed into said blood processing vessel at a flow rate, and said establishing step of said set-up phase comprises:

reducing said flow rate.

Claim 10. (Allowed) A method as recited in Claim 3, wherein said blood processing vessel is rotated at an rpm rate, and wherein said establishing step of said set-up phase comprises:

increasing said rpm rate.

Claim 11. (Allowed) A method as recited in Claim 3, said establishing step of said set-up phase further comprises:

maintaining a predetermined anticoagulant infusion rate to said donor/patient.

Claim 12. (Allowed) A method as recited in Claim 3, said establishing step of said set-up phase further comprises:

continuously removing platelets through a platelet port from said blood processing vessel.

Claim 13. (Currently amended) A method as recited in Claim 1, wherein during said platelet separation step and during said RBC separation and collection steps said method further comprises:

continuously separating plasma from said blood within said blood processing vessel;

continuously removing ~~at least a portion~~ a collectable quantity of said separated plasma through a plasma port from said blood processing vessel.

Claim 14. (Previously entered) A method as recited in Claim 1, wherein during said platelet separation step and said red blood cell separation and collection steps, said method further comprises:

establishing a blood component interface between separating blood components within said blood processing vessel, said interface including a red blood cell component disposed in a radially outwardmost disposition, a buffy coat component including a platelet component adjacent said red blood cell component, and a plasma component disposed in a radially inwardmost disposition adjacent said buffy coat component .

Claim 15. (Previously entered) A method as recited in Claim 14, wherein said blood processing vessel further comprises:

a red blood cell outlet port for continuously removing said red blood cell component from said blood processing vessel.

Claim 16. (Previously entered) A method as recited in Claim 15, wherein said blood processing vessel further comprises a platelet outlet port for continuously removing said platelet component from said blood processing vessel.

Claim 17. (Previously entered) A method as recited in Claim 16, wherein said blood processing vessel further comprises:

a plasma outlet port for continuously removing said plasma component from said blood processing vessel.

Claim 18. (Previously entered) A method for extracorporeal collection of blood components from a donor/patient comprising:

continuously flowing said blood into a blood processing vessel;

continuously separating platelets from said blood within said blood processing vessel by flowing said platelets in a first circumferential direction;

continuously flowing at least a portion of said platelets out of said blood processing vessel through a platelet outlet line;

continuously separating red blood cells from said blood within said blood processing vessel by flowing said red blood cells in a second circumferential direction opposite to said first circumferential direction;

continuously flowing at least a portion of said separated red blood cells out of said blood processing vessel through a red blood cell outlet line wherein said platelet separation and flowing steps are completed contemporaneously with said red blood cell separation and flowing steps;

collecting red blood cells in a red blood cell collection reservoir.

Claim 19. (Currently amended) A method as recited in Claim 18, further comprising:

continuously separating plasma from said blood within said blood processing vessel;

continuously flowing ~~at least a portion~~ said collectable quantity of said plasma out of said blood processing vessel through a plasma outlet line, wherein said plasma separation and flowing steps are completed at least partially contemporaneous with said platelet separation and flowing steps.

Claim 20. (Previously entered) A method as recited in Claim 18, wherein prior to said red blood cell collection step, said method further comprises a red blood cell collection set-up phase including:

establishing a hematocrit of at least about 75% within said separated red blood cells within said blood processing vessel and an AC ratio within said blood at about 8.

Claim 21. (Previously entered) A method as recited in Claim 20, said method further comprising:

maintaining said hematocrit and AC ratio during said red blood cell separation, flowing and collection steps.

Respectfully submitted,

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Date

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